

AMENDED IN ASSEMBLY JUNE 4, 2002

AMENDED IN ASSEMBLY JULY 17, 2001

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AMENDED IN SENATE MARCH 29, 2001

SENATE BILL**No. 545**

Introduced by ~~Senator McClintock~~ *Senators McClintock and Murray*

(Coauthors: Senators Battin, Haynes, Knight, and Margett)

(Coauthors: Assembly Members Ashburn, Bates, Hollingsworth, Runner, Wyman, and Zettel)

February 22, 2001

An act to add Section 162.3 to the Streets and Highways Code, and to add Section 21655.10 to the Vehicle Code, relating to highways.

LEGISLATIVE COUNSEL'S DIGEST

SB 545, as amended, McClintock. Highways: exclusive-use or preferential-use lanes.

Existing law requires that, prior to establishing exclusive-use or preferential-use traffic lanes for high-occupancy vehicles (HOV lanes), the Department of Transportation and local authorities, with respect to highways under their respective jurisdictions, make competent engineering estimates of the effect of the lanes on safety, congestion, and highway capacity.

This bill would require the Department of Transportation, on or before January 1, ~~2003~~ 2004, with respect to only those highways under

its jurisdiction, to ~~evaluate and~~ establish standards for *the evaluation of the effectiveness of* all existing HOV lanes in accordance with specified criteria and to evaluate all ~~other~~ HOV lanes that have been established for at least 2 years in accordance with relevant criteria.

The bill would require that the department's engineering estimates include a traffic model study comparing the alternatives of establishing an HOV lane, establishing a high-occupancy toll lane, as defined, establishing a mixed-flow lane, or not establishing additional lanes.

The bill would require that the analysis results of the study and a description of the methodology used for the study be completed and documented. Certification of competency of the analysis results and methodology for an HOV lane project would be required for inclusion of the project in the state transportation improvement plan.

The bill would require that a copy of the analysis results and methodology description be submitted to the Governor and the Legislature within 6 months of completion.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. Section 162.3 is added to the Streets and
2 Highways Code, to read:

3 162.3. (a) On or before January 1, ~~2003~~ 2004, the
4 department, with respect to only those highways under its
5 jurisdiction, shall establish standards to evaluate the effectiveness
6 of all existing exclusive-use or preferential-use lanes for
7 high-occupancy vehicles (HOV lanes). The standards established
8 by the department shall include, but not be limited to, the relevant
9 criteria set forth in Section 21655.10 of the Vehicle Code.

10 (b) The department shall evaluate all ~~other~~ HOV lanes under its
11 jurisdiction that have been established for at least two years in
12 accordance with the relevant criteria established under subdivision
13 (a).

14 SEC. 2. Section 21655.10 is added to the Vehicle Code, to
15 read:

16 21655.10. (a) The Department of Transportation's
17 competent engineering estimates required under subdivision (a) of
18 Section 21655.5 shall include a traffic model study of not less than
19 six months' duration that compares the alternatives of establishing

an exclusive-use or preferential-use lane for high-occupancy vehicles (HOV lane alternative), establishing a high-occupancy toll lane (HOT lane alternative), as defined in subdivision (h), establishing a mixed-flow lane (mixed-flow lane alternative), or not establishing additional lanes (no-build alternative).

(b) Except as authorized under paragraph (2) of subdivision (f), the traffic model study required under subdivision (a) shall cover an analysis segment consisting of at least the entire affected freeway section, or the corridor of which that freeway is a part, shall cover the entire congested period of the day, and shall include, but need not be limited to, all of the following:

(1) A modal choice submodel showing the fraction of travelers that will choose a high-occupancy vehicle mode, including, but not limited to, car pools, vans, or buses, instead of driving alone, dependent upon, but are not limited to, the number of passengers required to qualify a vehicle as a high-occupancy vehicle and the HOV lane timesavings. Data shall also be gathered from interviews conducted with motorists.

(2) Distribution of the total freeway volume between the HOV lane and the mixed-flow lanes, dependent upon modal choice fraction.

(3) A congestion submodel showing travel speeds and time, dependent on the vehicular volume in the various lanes.

(4) Calibration to confirm that the model yields results that are consistent with observed prebuild traffic volumes, speeds, and number of car pools. The observed total prebuild person trips (over all modes) within the analysis segment, which shall be referred to as the “person-trips base,” shall be held constant and used as the basis for subsequent benefit calculations.

(5) Iteration of the model as necessary to ensure that the travel times found in paragraph (3) are consistent with those used in estimating the fraction choosing high-occupancy vehicle modes under paragraph (1).

(6) Total travel time, emissions, and fuel consumption shall be computed by summing over the same “person-trips base” for each build alternative, and expressed as change relative to the no-build alternative.

(7) Emissions estimates shall include carbon monoxide, carbon dioxide, hydrocarbons, and nitrogen oxides. Emissions and fuel consumption shall be computed using methods of the State Air

1 Resources Board and shall be dependent upon vehicle miles
2 traveled, vehicle trips, and average speeds in the various lanes.

3 (8) Capital costs, annual operating costs, and annualized
4 capital and operating costs shall be estimated for each alternative,
5 incremental to the no-build alternative. Costs unusual to each
6 alternative, including any special lane width, buffer lanes,
7 additional shoulders, enforcement zones, merging regions, and
8 enforcement operation, shall be separately identified and
9 estimated.

10 (9) Cost-benefit ratios shall be estimated for each alternative
11 and may be expressed as dollars of total annualized cost per unit
12 of benefit for each of the various benefit measures specified in
13 paragraphs (6) and (7), when costs and benefits are calculated
14 relative to the no-build alternative referred to in subdivision (a).

15 (10) The study shall provide data sufficient to determine
16 whether the use of high-occupancy vehicle lanes improves air
17 quality to the extent included in the state implementation plan filed
18 under the federal Clean Air Act (42 U.S.C. Sec. 7401, et seq.).

19 (11) The study shall compare the number of traffic violations,
20 accidents, injuries, and fatalities that occur on portions of
21 highways that have high-occupancy vehicle lanes to portions of
22 highways that do not have those lanes.

23 (12) The study shall compare the average number of
24 passengers per vehicle before the portion of the highway had an
25 HOV lane with the average number of passengers per vehicle after
26 the portion of the highway had an HOV lane.

27 (13) The study shall evaluate the relationships between public
28 transit service and usage and the introduction and usage of
29 high-occupancy vehicle lanes in a given corridor.

30 (14) A model shall be developed evaluating the potential
31 impact to public transit services in a given corridor if
32 high-occupancy vehicle lanes are not used.

33 (c) The Department of Transportation shall analyze the results
34 of the traffic model study to determine the most efficient choice
35 among the HOV lane alternative, the HOT lane alternative, the
36 mixed-flow lane alternative, and the no-build alternative in terms
37 of total person delay, emissions, and cost.

38 (d) The Department of Transportation shall require that the
39 performance results and comparative analysis conducted under

1 subdivision (c) for a high-occupancy vehicle lane project be
2 distributed as follows:

3 (1) As part of any oral presentations at hearings and part of any
4 visual presentations in handouts and workshops for the project.

5 (2) In any literature or visual displays prepared for the public
6 or for public officials in relation to the project.

7 (3) In any environmental impact report prepared for the
8 project.

9 (e) The analysis results and a description of the methodology
10 shall be documented in sufficient detail to support stand-alone,
11 critical review, and duplication of the results.

12 (f) (1) It is the intent of the Legislature that the Department of
13 Transportation contract with the University of California for
14 archiving and certification of competency of the documentation
15 required under subdivision (e). That certification shall be required
16 for inclusion of the project in the state transportation improvement
17 program.

18 (2) A study that does not use the methodology described in
19 subdivision (b) may not be certified unless the proponent of the
20 alternative methodology proves that the alternative methodology
21 yields results that are as comprehensive and accurate as the results
22 obtainable through the methodology described in subdivision (b).

23 (g) The Department of Transportation shall submit a copy of
24 the documentation required under subdivision (e) to the Governor
25 and the Legislature for review within six months of completion.

26 (h) For purposes of this section, a “high-occupancy toll lane”
27 or “HOT lane” is an HOV lane that, for a toll, may be used by
28 vehicles with less than the number of passengers otherwise
29 required to lawfully use the lane.

